

Hillandale



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Phonograph and
Gramophone Society

THE HILLANDALE NEWS

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Edchat

Members who read this magazine regularly (and I know there are some who do not, because I still get the occasional letter addressed to the house I left last May) will have noticed my frequent apologies for late publication.

Not that anyone has actually complained, and it may be that no one actually cares two hoots when the magazine comes out. However, the effect tends to be cumulative, and when the April issue does not appear until the end of the month or the beginning of the next, it seems to me that something needs to be done. The problem at present is simply that I have not got enough suitable material to fill the twenty pages or so of text which go to make up an issue. I do have a small stockpile of articles in the in-tray, but they all need considerable editing if they are to make interesting reading. Some are simply too long and verbose, others were originally written for other magazines directed at a different readership and need adapting to suit our own sphere of interest.

Such editing, however, tends to be fairly laborious, and I seldom have the energy or inclination to undertake it, and first choice tends to go to those articles which are concise, well presented and in need of no more than an occasional correction of the grammar or syntax. We have over 600 members in the Society, all presumably interested in some aspect of sound recording and reproduction, and I am quite certain that many more of those members could write a contribution now and then. It may only be in the form of a letter asking for information on some point of curiosity, and if the Editor can answer it so much the better, but if he cannot, maybe someone else will respond in the following issue. Go on : don't be shy, write something - all of you!

This is perhaps an appropriate point at which to record our gratitude to those who regularly send in articles for the magazine. Pre-eminent among these is Frank Andrews with his scholarly blockbusters, one of which forms the main feature article in something like four issues out of six. The President is another who tries to provide the Editor with a page or two from his pen whenever he can think of something to say, and it becomes an embarrassment to have to call upon him so often. Both the Secretary and the Treasurer likewise provide support, the latter even saving the Editor a page of typing. To all of these and everyone else who has contributed during my Editorship, I say Thank You, and keep up the good work.

A letter from a French collector reached me recently on the subject of aluminium diaphragms. It seems that he was puzzled by the presence of such a diaphragm in a 1929 Columbia machine with a No. 9 soundbox, when the HMV 101 still had mica at this date. Metal diaphragms were not new when Columbia put them in the No. 8 soundbox in 1926 (a year before the No. 5 appeared on the H.M.V. Re-Entrant models). Edison had them on the Model H in 1908, and there was the Lenthall soundbox of (I think) 1922 which was one of the first aluminium-diaphragm boxes of the 1920s. The H.M.V. 101 portable was designed in 1925, however, when mica was still the rule rather than the exception, and continued in production until at least 1931. Whether the Columbia 112A of 1929 was a better machine is a moot point, but certainly it was not startlingly superior, and the only portable which really surpasses the 101 in my view is the 102 which replaced it late in 1931.

Every now and then a name or a feature on a record label catches the eye and dents any confidence in the finder that he knows something about records; this happened recently to the writer. It was an Australian 10-inch Columbia 0608, "Australian Bird Calls", two sides labelled as by Corporal Phillips (Imito). Why Corporal Phillips, corporal of what; army; police? As some of us were once aware, a corporal is a lowly creature who would not want his rank printed on a gramophone record without qualification, but not so Corporal Phillips. After all Napoleon - and later Hitler - were both corporals and managed to achieve immortality of a sort. Back again to Phillips, he seems to give first-class imitations of Australian birds, most of which are never heard in the United Kingdom, and as Imito he had a record issued by Zonophone (6134) in the early thirties, with sides of both English and Australian birds and imitations of everyday noises. About the same time Phillips put aside rank and pseudonym and appeared on four sides for Zonophone (6106 and 6141), performing as a whistling soloist in two marches and two novelties. The name Imito seems to bring to memory a variety turn of that name in the thirties and possibly later, and perhaps members may know more facts about him. Also, could Phillips possibly have been Edward Avis (sic), who gave bird imitations on the Regal label?

Recent correspondence has touched on the distorted quality of coarse-grooved 33½ r.p.m. records that were intended for use in the talkie cinemas, and by chance in February B.B.C. television screened the early sound film of "Don Juan" with John Barrymore. Most members will know that this was one of the milestones of cinema technique, being the first example of the Vitaphone system adapted to a full length film. It was first shown at the Warner Theatre in New York on August 6th 1926, and had a full musical score by William Axt, played by the New York Philharmonic Orchestra. There was no spoken dialogue and few sound effects, the only ones being the clashing of swords in a fight, and twice when actors hammered on doors. The musical accompaniment on the discs was obviously recorded at a low level, and "boxy" in sound, but even that was not free of noticeable distortion in many places. In what is probably a fairly recent transfer the surfaces of the discs were quite unobtrusive. The orchestra had recorded the music at the Manhattan Opera House and 107 players took part, lead by Henry Hadley. The list of short Vitaphone items that supported "Don Juan" in 1926 were probably more impressive in themselves, as unlike the main attraction the artists actually spoke or sang. A list is as follows:-

Will H. Hays - Introductory Speech
Mischa Elman playing Dvorak's "Humoresque"
Marion Tully - aria from "Rigoletto"
Roy Smeck - banjo, ukelele, guitar etc.
Giovanni Martinelli - aria from "I Pagliacci"
Marion Talley - "An Evening on the Don"
Harold Bauer and Efrem Zimbalist - Variations on Beethoven's Kreutzer Sonata
Anna Case - "La Fiesta" with the Cansino Dancers (who were Rita Hayworth's parents)

The show ran for nearly eight months and grossed 800,000 dollars.

Reading obituary columns is generally a pursuit of the elderly, often out of relief at not finding themselves in print - really a sort of Russian Roulette. It is not likely therefore that many members noted the passing of Lord Lurgan in February, aged 81:

"Lord Lurgan, who was he?" most will ask, and with justification. Well, he can be found on 10-inch Columbia (DBs) of the 1930s as the Hon. W.W. Brownlow, baritone. He seemed to stop recording in 1937 on succeeding his father as the third baron. Brownlow was a pleasing and accomplished singer of ballads. Outside the recording studio he specialised in recitals of songs by Warlock, Quilter, Delius, Bridge and Granville Bantock when such performers were rare.

At a recent London meeting the subject of 10-inch Harry Lauder records was raised, especially with H.M.V. in mind. There were four of these on the E label (E67, 168-170) and it now seems they were double-sided couplings of earlier single 10-inch G & Ts. Lauder had started making 7-inch G & T records in 1902. It is often overlooked, in fact, that he made quite a number of 7 and 10-inch sides for Zonophone. The latter, at first single-sided, sold for 2s (10p.) each against the 4s (20p.) and 6s (12-inch) for their G & T counterparts, and it would be true to say that the buyer of either label would be given just about the same. The patter was always the same too, except being more extended on the larger records, and in later years when the acoustic recordings were 'made over' electrically, this patter was unchanged. Presumably every song carried its own interpolations, generally starting with "Mon, I'm telling you...." and Lauder often finished by a spoken repeat of the last line plus chatter to fade out. The single-sided Zonophones of the first decade of the century were mated to form double-sided records around 1912, and these sold for 2s.6d. (12½p.). Zonophone continued to issue Lauder records right through the Great War, each a condensed form of the H.M.V. D-series black label, and including even a version of D1, his appeal for a million pounds for disabled Scottish soldiers, a fairly rare record today. During the war, Lauder was promoted from dark green label to the Zonophone GO (Grand Opera and Celebrity) series on a red label at 3s.6d. (17½p.), although his earlier songs still appeared under their old numbers, but gradually changed to a Celebrity Label as the stocks of green labels ran out. By 1922 Lauder's Zonophone repertory had reached its peak, and by 1931 all old numbers had been either deleted or given the GO prefix. In the next year the catalogue became established at 31 records, and it was a credit to Lauder's popularity that the list remained unchanged until June 1940 when it was cut back to his most popular three records: "Roamin' in the Gloamin' ", "I Love a Lassie" and "The End of the Road".

However, Lauder Regal-Zonophones still cost 3s6d., plus Purchase Tax. There were three distinct Zonophone labels for Lauder. The first was a dullish red and found in several shades with Zonophone Celebrity Record around the upper half, with the circular Zonophone logo above the centre hole. In the second style the Zonophone logo made way for the Dog and Trumpet, and a more modern lettering with boxes in the lower corners like the H.M.V. counterpart. The last Zonophone style had ZONOPHONE around the upper part, and the Zonophone logo returned with supporting spandrels incorporating Z and R. Later labels of this style tended to become brighter and more of a scarlet red. The printing was always in gilt. Whether the individual cares for Sir Harry Lauder's style or not, it is difficult to think of a music hall performer who sang more songs that the public took to so readily. Florrie Forde would certainly be a runner-up, and both still have a number of songs in the community singers' repertoire. Lauder had a rich baritone voice which suited his own songs, but showed limitation as soon as he essayed anything outside, such as the "Road to the Isles" or "Bonny Mary of Argyle". His name usually appeared as the solo writer or composer of his own songs, and there is a noticeable musical similarity between a few of them, showing an attempt to repeat success, not a culpable fault in one who has left so much that is still popular.

JANUARY MEETING

The evening was devoted to Pathe centre-start discs, presented by our Pathe enthusiast Len Watts. In addition to the recital of Pathe recordings, a display was mounted of many other makes of phono-cut discs. These were in two categories; obvious Pathe-manufactured items such as Henry, Ultima, Opera, Ideal, Aspir and Dutreh; and others with no resemblance to Pathe, such as Corona, Supra-Disque, Edison Bell Little Champion, Lutetia, Phenix and Aerophone, to name but few.

The first half of the recital was given to marches, mostly played by various Pathe studio orchestras. Apart from a Sousa march, most of the items were of French origin, including several by the director of the Garde Republicaine Band, Gabriel Paries. These latter included The Dandy, The Old Soldier, the Bombardier, Richard Wallace and Valeur Francaise.

After the interval, the recital continued with vocal items, mostly English. However a few operatic items were included, by Sammarco, Caruso, Delna and Ancona. One or two music hall items were heard, notably 'Neither Here nor There' by Whit Cunliffe. Other artists heard were Peter Dawson, John Coates, Thorpe Bates, John McCormack, Carrie Tubb, Ben Davies and George Baker. The evening ended with Harry Fragson singing and playing his own song, still popular today; 'Hello, hello, who's your lady friend?'

Dear Mr. Proudfoot,

I was dismayed at the article in Hillandale 133 (August 1983) by George Taylor, on the English Columbia Matrix series. Three years earlier Mr. Tayllor had asked for help in deciphering Columbia's complex acoustic numbering series. I responded in Hillandale 118 with a letter indicating that a fairly detailed series of articles had been published on this subject, in Record Research magazine in 1975.

It appears that he has not only ignored the earlier work, but struck out on his own and attempted to re-invent the wheel, as it were: many of the dates and details he gives are incorrect. (Frank Andrews cogently pointed out many of the mistakes in the December 1983 issue). It would have been a much greater service to readers if Mr. Taylor had added to existing research with his new sources, rather than taking us backwards a few steps.

It is frustrating to spend considerable time on research such as this, then eight years later to see someone consciously ignore it and put incomplete or incorrect information into print - especially in a publication as respected as Hillandale.

Please, Mr. Taylor, by all means continue your research, but for the sake of your readers make a reasonable effort to get it right before publishing. Read the literature!

Sincerely, Tim Brooks
(President, Association for Recorded Sound Collections)

Well, what about an article, Mr. Brooks? - Ed.

Putting the Record Straight

by Ted Cunningham

In the palmy days of my childhood no reader of the popular press ever needed to wonder what to do with his gramophone records. A recurring piece of advice would appear at regular intervals in the Helpful Hints columns of the Daily Graphic, the News Chronicle, Everybody's Weekly, John Bull, or even the Hotspur. There, among the tips for removing teapot stains from oak (or, for that matter, oak stain from teapots) would be found an item entitled *How to make a Fruit-bowl out of a Gramophone Record*. The fact that the recommended raw material for the fruit-bowl was always gramophone records and never, say, lamp-shades or discarded tennis balls, suggests that the paragraph may have owed its repeated appearance to bribery from some record manufacturer anxious to keep stocks moving. If so, the scheme must have failed: I never once knew anybody who actually made such a fruit-bowl, I never saw one gracing anybody's home, and all my years of foraging around the nation's junk-shops have so far failed to bring to light a single example of this branch of folk-art. I conclude that despite persistent and unrelenting pressure from the entire body of press-barons, gramophone record owners of the 1930s remained unflinching in their opposition to fruit-bowl manufacture.

The method was simplicity itself. One immersed the record in a bath of hot water so that it became soft and malleable. This allowed one to work the outer edges into convolutions like those of a clam-shell, and to raise the sides of the bowl uniformly to the same level all round. At the same time one had to keep the label flat to form the bottom of the bowl, the centre hole remaining exactly central. Dead easy.

Of course, what one would have preferred to find in the Helpful Hints columns, rather than the notion of forcing records into strange shapes, was the exact opposite: an effective method of straightening them out. One looked in vain, even in specialist magazines, for advice on restoring a warped record to its proper flatness. Only once did I find any guidance, in the late 1940s when 78s had nearly had their day. This is what it said:

"Place the warped record between two sheets of glass and stand it on a flat surface. Fill a saucepan with hot (not boiling) water and place it on top. Leave it until the water is cool. The record should then be quite flat."

At the time I owned a record shaped like the brim of Roy Rogers' hat. I followed the instructions to the letter, and felt strangely chastened an hour later to find the record as curly as ever. Obviously I needed more power. I tried again using a much bigger saucepan, a whopper, the sort with an extra grab handle so that one can lift it off the ground. I filled it at considerable expense with hot (not boiling) water and placed it with difficulty atop the glass-encased record. This time the result was impressive. The record was quite flat, oh yes. What caught the attention, though, was its upper surface, the one which had been nearest the source of heat. It shone like a mirror of jet, having been entirely divested of its grooves. The underside was perfectly normal.

I never used this method of unwarping again. Instead I devised a safer system which I will describe shortly. But for years afterwards it lingered in my mind as the ultimate torture one could inflict upon a record without actually breaking it. I was

wrong. Just how wrong became clear to me only recently, when I began to ask some CLPGS members how they straightened out their warped records. I am now in a position to reveal to you practices which have been going on for years in this respectable Society, practices so barbaric as to chill the blood. One man who shall remain anonymous (oh, all right then, it was Len Watts) told me how he waits for a hot sunny day and places his records between sheets of glass on the lawn for ten or twenty minutes, checking from time to time to see that they don't get overcooked. Another, an eminent researcher whom I have been known to harbour beneath my own roof, confessed that he puts a record between sheets of glass and then actually holds it close to a fire. Whether coal or electric I was too shocked to ask, but either way this must be as hard on his fingers as it is on the record. Other members made me swoon away as they described with relish putting precious records in an oven set at No. 3: twenty seconds too long and what started out being merely warped ended up as a Salvadore Dali still-life.

One approach which at least showed the merit of scientific thinking was vouchsafed to me in the course of an edchat one day with a very senior member of the Society. He had only once found the need to unwarp a record, he told me. It was one which he had left in the sun on the back seat of the car. When he returned he found that it had moulded itself exactly to the pleats in the upholstery. Reasoning soundly that what the sun had caused, the sun could cure, he laid the record on a flat board on a low wall in the garden and retired to see what would develop. What developed was a gust of wind. The board blew off the wall and the record broke.

I am forced to the conclusion that I am the only person fit to let loose on a warped record. But in case anybody else wants to know a safe and gentle way to uncurl one, here it is:

1. Obtain from a glaziers two sheets of $\frac{1}{4}$ " plate glass 13 inches square. They should cost you about £1.60 each. If you object having your records disfigured with bloodstains you will need to do something about sharp edges and corners. You could have them bevelled by the glazier but this would increase the cost of the glass to about £4 per sheet. Personally I find one can do all that is necessary at home, using an ordinary file.

2. Place your warped record between the sheets of glass. I always fix the sandwich together with rubber bands. I don't know why I do that; it isn't necessary. Now put the whole package on a flat surface in a nice warm place. Not a hot place. A warm place. The top of a modern gas central heating boiler is fine. A heated airing cupboard will do nicely.

3. Put weights on top of the glass. Anything heavy will do, but if you find some proper weights in a junk shop you can use precision. I find 20lb. is about right. I once tried 28lb. and can still show you a record by the London Baroque ensemble with patches of groove flattening which remind me of my first spectacular experiment in this field.

4. Have you done all that? Right. Now GO AWAY AND LEAVE IT ALONE. Go on, find something else to do for at least 12 hours. Make a fruit-bowl or something. If using an airing cupboard, leave it alone for at least 24 hours. Three days if you like, or a week; it won't overcook. Don't be impatient to see what is happening. After all, that newly-acquired record has waited 50 years or more for you to play it; it will wait another few days.

SNIPPETS FROM THE SECRETARY

Like most tasks in life, there are two sides to the Secretarial post in this Society. First the bad news. While dealing with a membership list of nearly 700, it is inevitable that one or two addresses will incur a typing error. I do try to double check as I re-type the addresses on the odd occasion, but it is regrettable that some errors still occur. Most members appreciate that the Society is run entirely by volunteers, but one member seems to assume that we are a professional organisation employing paid secretaries to do our typing for us (with a £5 annual sub?) I do hope, sir, that you will be a little more sympathetic next time you write to us. It was obviously not a serious error on your address and you did receive your magazine. To coin someone else's phrase, "Don't shoot the pianist, he's doing his best".

Having cleared that grievance off my chest, let me mention the more pleasurable side. I get a considerable number of letters each week from all parts of the world which carry requests for books, or membership, or even a change of address. Many add a postscript giving the Society officers support and encouragement for which we are more than grateful. We usually try to reply to your requests by return post but sometimes this is not possible because the item you require is out of stock, or other duties sidetrack our attention. Occasionally delays occur which are beyond our control. This is the situation at present with the Malcolm McEachern l.p. records which are somewhere between Australia and Woking. These records were despatched in early February and it can take between eight and twelve weeks to travel half-way round the world. As soon as they arrive, they will be sent on to those who have ordered copies.

An added bonus is the quantity of postage stamps received. All the British ones are sent to charities who make good use of them, and the overseas ones are avidly collected by a close relation who has recently retired and has little else to do with his leisure time.

Our range of decal transfers has been very much enlarged recently and the quality of the Edison ones has been much improved by our new suppliers. For example, the metalwork transfers M21 and M23 are now available to suit early (circa 1902-1907) machines or later models. We have also added the Edison Standard banner to the list. If you are restoring a machine it is worth looking at the booklist again. While talking of restorations, it is interesting to see where our transfers have been used to make a perfectly good collector's nightmare look like a real botch job. One I recently saw was a Pathe box, with HMV 101 portable motor and turntable, Columbia tone-arm, obscure soundbox and reproduction brass horn - all proclaimed by the transfer to be 'The Graphophone', with Edison Fireside corner transfers to finish the masterpiece. Some unsuspecting customer was probably encouraged to part with good money for what he thought was an original machine.

We hope that we can encourage a few 'country' members to our August meeting, which will be held at a most unlikely venue. The London meeting will be held on Saturday August 11th at Neasden Public Library, in the London Borough of Brent. George Frow will be the presenter with a programme to be decided, but he is sure to bring his Idelia amongst other things. Easy access by all forms of public transport, easy access from the motorways via the North Circular, and easy parking. The programme starts at 6.00 p.m. Not to be missed....

In view of the recent seismic disturbances that have shocked the whole civilised world, it is interesting to come across an artiste who is delighting a goodly section of the talking machine world, who has had the painful experience of a real earthquake. Mr. Philip Ritte can safely lay it to himself that he is alone in this respect. The experience occurred when our artiste was quite a youngster, and happened in Jamaica. He was about eight years old at the time, just at that age when the average boy experiences a mild but satisfactory substitute for an earthquake at the hands of an enraged parent, and the reality of the danger is with him to this day. So he told a representative of the *Sound Wave*, who recently had the pleasure of meeting him for the purpose of getting a few interesting facts in the life of this excellent tenor vocalist for the readers of this journal.

Mr. Ritte made his appearance in this cold and critical world in the famous city of Edinburgh. At the early age of two years he became a traveller of "credit and renown," making the journey to Jamaica in the company of his parents, whom it is best to state were a good number of years older than the precocious globe-trotter. Whilst still in that period of life not usually associated with travel, in fact, at the age of eight he came back in company with the same travelling companions to London, in which city he has already made considerable headway in the concert and musical world. His first experience of singing was at a North London Synagogue, where he sang the usual treble and alto of the boy singer. Thence he migrated as a tenor to the well-known Reformed Synagogue in Berkeley Square, W., where a fine choir and organ lead the music of the worshippers.

The experience gained there will be useful to him in his career of talking machine artiste, for, as is well known, there is a good demand for records for Hebrew music. In the great majority of cases the manufacturing companies have to go abroad for artistes capable and competent of making the records, and we shall doubtless see in the immediate future Mr. Ritte's fine voice used for the purpose we have here indicated.

After the breaking of the boy's voice our artiste suffered an artistic interregnum, during which he went into the business of a litho artist. Singing, however, came natural to him, and it is easy to understand that

whilst still in his teens he got an appointment on the stage of the Savoy Theatre. Here he remained for four years, sharing in the great popularity of the Gilbert and Sullivan repertoire production. That was a matter of ten or eleven years ago, and when the Savoy Theatre Syndicate ceased he soon found employment with Mr. Seymour Hicks in the "Cherry Girl." This lasted for six months, at the end of which he began to find that his concert engagements were sufficiently numerous to force him to a decision between the stage and the platform. The latter won, and Mr. Ritte has never had the least occasion to regret that he exchanged the glamour of the footlights and the splendour of stage costume for the softer light of the concert room, and the "clean

biled rag" of the artiste. He has appeared at most of the London entertainments, is a popular favourite with the *habitués* of Boosey's Ballad Concerts, and has scored instant and binding successes at most of the provincial centres. His voice is pure and robust, and he is the owner of a very extensive repertoire, embracing most of all the ballad and oratorio favourites. Mr. Ritte was one of the first pupils of Signor Baraldi, the famous master of vocal culture, who has turned out so many of the present-day popular favourites.

Coming to the talking machine business, Mr. Ritte made his "record" debut on the Edison Bell Cylinder list. For that company he has made a number of titles, and since their introduction into the disc world the same company have produced some good specimens on the latter form of record. He has also made some fine

selections for the National Phonograph Company on their cylinders, which are known and appreciated by the connoisseurs of good records. In May last he made the and first record for the Beka Company, "My Dreams," now the latter firm are making a great feature of some later fine titles he has made for them. In their January list the Beka Company have two capital titles, "I hear you Calling me" and "My Sweetheart when a boy," whilst for February they are featuring the ever popular favourites, "Come into the Garden Maud" and "Thora." These are very fine specimens, as our review columns will testify, and we can safely prophesy that our readers will endorse these statements, as well as the welcome we give to this capable artiste into the list of our popular record makers.



The Clockwork Music Group, as its name denotes, is interested in all forms of mechanically produced music which naturally includes that of gramophones and phonographs. (The Group does have other not obviously related interests such as vintage radios (mechanical?) and mechanical and optical toys). Any CLPGS member is more than welcome to attend but it seems that such a visit is rare. This is a pity since the Group represents our interests in the area in the absence of an official branch and the meetings are obviously both interesting and appropriate. Contact Phil Bailey for a different Saturday afternoon outing. The Group now has a new venue in the Science and Engineering Museum at Newcastle-upon-Tyne. Five meetings were held during 1983: a typical format might be a talk coupled with a display of related items. One meeting featured a slide presentation of clockwork music machines both privately owned and in various museums. A "Tauber Tag" was held with a shortened version of "Land without Song" followed by a display of programmes, records, etc, of Richard Tauber, while the Christmas meeting consisted of a magic lantern show complete with readings, sound effects and music. One of the more unusual displays mounted during the year was a collection of Andrews sound boxes made for a competition in the 1930s from Liver Salt tins! Apparently they work quite well so eat your heart out Jim Goodall!

Talking about Jim, he reports three meetings at the Castlehill Centre in Cupar. The first, on 14 December, featured two uncommon HMV 99 portables which were only on sale for about a year in the 1920s. These are the only HMV machines with a straight one piece tone arm fitted with a No 16 metal sound box. Unfortunately, although one of the machines would run perfectly off load, it immediately lost speed when a record was played. Jim spent most of the evening dismantling it and looking for the usual causes of such trouble but in the end was defeated by a recalcitrant spring drum which refused to be parted from its motor plate. The second meeting, on 11 January, was devoted to Chris Hamilton's extensive collection of record labels supplemented by some from Jim's own collection. Chris, who has made a study of this aspect of the gramophone business, has over 800 different labels and was able to tell many fascinating stories. The whole record making industry has had a long and complicated history of take-overs, mergers, litigation and liquidation. (Witness Frank Andrew's learned articles). Apparently careful study of the subtle changes in label design can be of great assistance in dating particular recordings and identifying the company which pressed it. The third meeting, on 8 February, was devoted to an interesting and varied programme of famous old time music hall artists presented by Chris Hamilton. By way of a change from black portables, the Branch descended on Chris's home for the fourth meeting, held on 14 March, to listen to some of his large cabinet machines.

At the November meeting of the Midlands Branch, David Cole gave a programme of records entitled "Songs Again", in which he gave a very detailed account of songs first recorded many years ago and subsequently recorded again in later years when the treatment was very different. Some examples were: "Coming through the Rye" recorded in 1898 by Sybil Lamonte contrasted with "Rockin' through the Rye" 58 years later, and "If you were the only girl in the world" (1916) compared with Acker Bilk's version of the 1950s. In January, Eddie Dunn chaired the Branch AGM and reviewed achievements - the Annual Dinner, visits to collections, the Phonofair and the well attended bi-monthly meetings. The rest of the evening was given over to members' choice - a popular item. Everyone brings along two or three records and the choice is often surprising. For example, one member favoured the contrasting styles of Billy Williams and Eartha Kitt, while another chose Ernst Groh to compare with the Sunny Terry Trio!



Dammit, Sergeant! Even the GERMANS are complaining about the noise!

MR. LUMIERE AGAIN

by Christopher Proudfoot

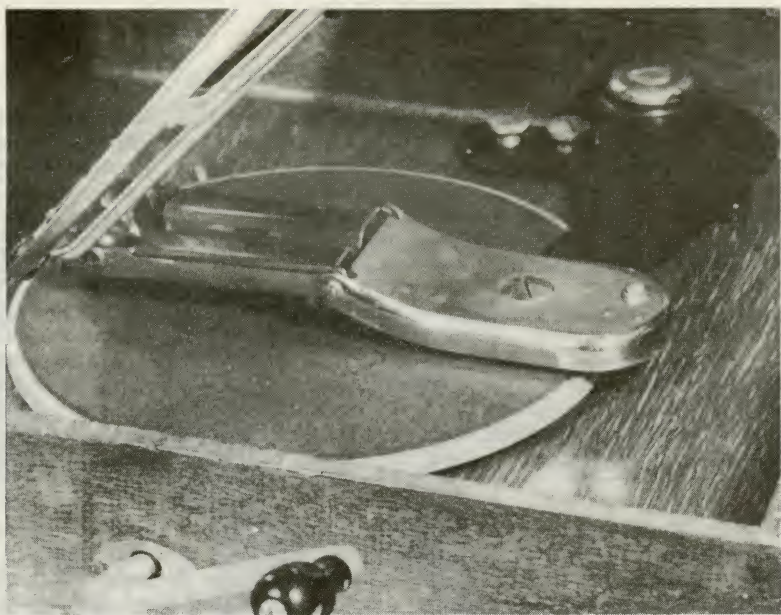
In the last issue, I promised some illustrations of a Pleated Diaphragm variant (a most rare disease). Here they are, and it will be seen that the diaphragm itself is of standard construction, although it is designed to play at an angle of about 45 degrees rather than vertically. Because it is situated tangentially rather than diametrically (more like a conventional lateral cut soundbox, in fact), the stylus bar pivots and needle-holder are modified, but the really interesting feature is the supporting arm, or travelling arm as I suppose one should call it.

This is a sort of dog-leg, the two main sections pivoted together on a ball-race, and an off-centre link, parallel to the main section, ensures that the second section of the dog-leg, which carries the diaphragm, moves across the record in an almost straight line. This must be the nearest approach to parallel tracking ever achieved on an acoustic gramophone, apart from the unwieldy Balmain. An ordinary tone-arm of course would not allow of such a system without sacrificing certain essential qualities of a sound conduit, such as the absence of sharp angles and of complicated joints likely not to be airtight.

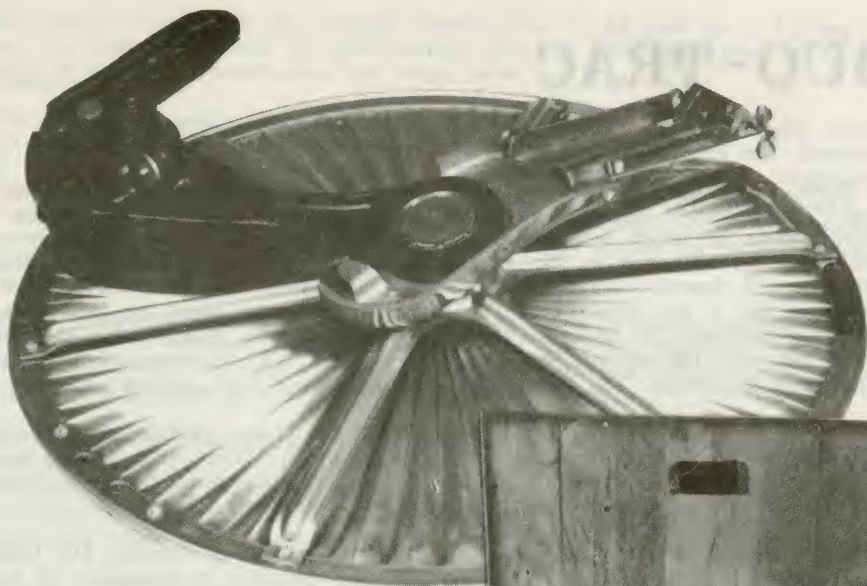
The main pivot, at the rear of the turntable, is on a cast iron base attached to a plate on the motor-board by two large thumbscrews. Clearly, this was intended to be removable without recourse to spanners or screwdrivers, and was designed as an optional alternative to the tone-arm of an existing gramophone. The plain wooden packing case in which it was sent out from Hayes is shown in the fourth photograph: the machine on which this diaphragm is mounted is purpose-made, with a 59 motor as fitted to the 101 portables from about 1927, complete with a matt gilt speed control as found on the de luxe red leather 101 also introduced in 1927. The brake, on the other hand, is gloss-gilt to match part of the travelling arm, and is similar, though not identical, to that of the 460 and 510 models and must have come as part of the conversion kit.

It seems strange that as late as 1927 (or maybe even later) someone considered it worthwhile to construct a Pleated Diaphragm machine. The question is, was it already obsolete, and being used by some backward-looking enthusiast, or was the kit marketed by H.M.V. at that time as a cheap way of 'modernising' an old gramophone or of making your own? Obviously the real object would have been the disposal of stocks of Lumiere diaphragms, but the use of steel pressings (gold-plated at that), castings and a purpose-made brake lever suggest that a fair production run was anticipated. I cannot say whether this is a sole survivor, but I can say that it is the first I have seen, nor have I heard of anyone else having seen another. There is a Lumiere diaphragm in the Royal Scottish Museum in Edinburgh which has no gramophone and is still accompanied, as far as I can recall, by a wood packing case, and it is possible that this may also be of the peculiar type under discussion. It is many years since I last saw it, and I think it quite possible that I might not have noticed its unusual design if it was in the folded position at the time. I certainly do not recall examining it closely, and it would be a kindness for one of our Scottish readers to investigate on our behalf.

For anyone anxious to acquire this puzzle piece, it is coming up for sale at Christie's South Kensington on April 5th, should this issue by chance reach you by then.



*Don't, Second / For the best of the
world's most famous voice!*



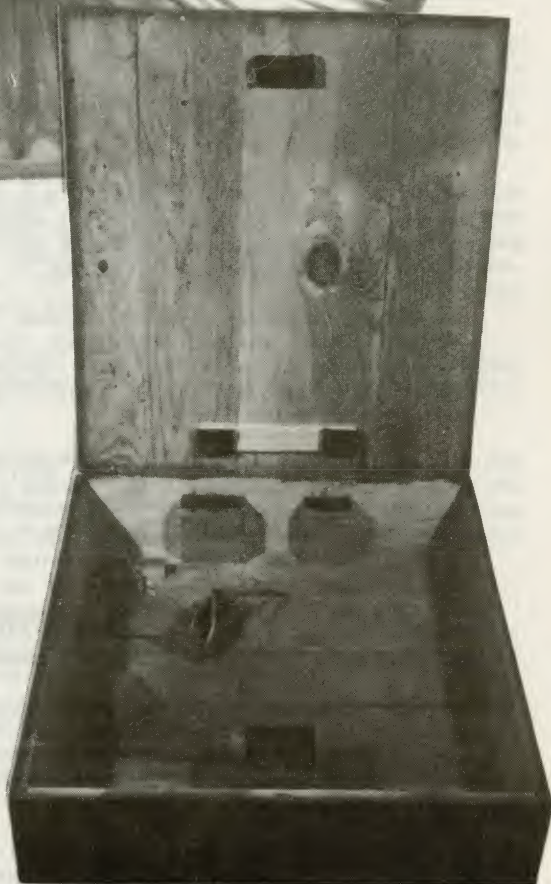
FACING PAGE: (Top) The arm and diaphragm in playing position.

(Below) The needle-holder, and strange inverted trade-mark plaque (Is this the only time Nipper appears on his head on an H.M.V. product?)

ABOVE: Worm's-eye view of the arm, with its parallel-action link.

RIGHT: The transit box.

(Christie's South Kensington photos)



DUO-TRAC

by Frank Andrews

Some years ago I promised fellow member Ron Armstrong that I would let him know if I discovered anything interesting on the history of the Duo-Trac machines and records, some of which he demonstrated at the 1981 A.G.M. of the Society. Earlier references had appeared in the June and August issues of Hillandale in 1973, by H. Nichols and J. Laurie. What follows is all I have been able to discover from my own researches but I am afraid that the question that was asked by H. Nichols in 1973, 'Whatever happened to the Duo-Trac?' will still remain unanswered. I have nothing to confirm that the patents were taken on by one of the large recording companies, as has been suggested. The last of these patents would have expired in 1946.

British Ozaphane Ltd, manufacturers of the Duo-Trac machines and recordings, was registered as an incorporated private company on 9th March 1936, having been formed on the 3rd with £150,000 capital in £1 shares. The membership of the company was limited to fifty, but in fact there were only ten stockholders.

The founding of the business rested on an agreement of January 6th 1936 between two trustees for the proposed company and two established businesses of 5-7 Avenue Perier, Paris; Le Film Ozaphane S.A. and Cinoza S.A. Under this agreement the trustees acquired for the company Letters Patent, licences, rights and processes owned by the French companies. Kalle & Co. A.G of Bubrich-Weisbaden were also involved under a licence granted to the French.

British Ozaphane were enfranchised to exploit their acquisitions in the U.K. and Northern Ireland, the Irish Free State, the British Dominions, India, the Crown Colonies, Protectorates, Mandated Territories and any other parts forming a part of the British Empire and Commonwealth, but excluding Canada, Newfoundland and American islands north of the Panama Canal.

The French companies owned two classes of patents and were the licencees of a third class. Under these they owned a process of copying cinematographic film pictures or sound-tracks made on a base of regenerated cellulose of extreme thinness, without the use of silver emulsion. On consideration of a royalty, the French companies assigned one class of patents to British Ozaphane Ltd and granted a licence to use the other two classes, but solely for use in film sound-tracks. The French companies retained all the rights in the cinematograph side of film production. The British company was to own the patents and enjoy the licences until the expiry of the patents and they were not to assign them to others without permission from the French.

For these assets, the French companies were given 30% of British Ozaphane's shares, to the value of £45,000, the rest of the shares being subscribed for by those who comprised the company. The French companies were entitled to purchase another 10% of the shares, and any future increase in capital was to be available to them on the same terms.

The French companies were to obtain a total of £50,000 as a royalty, £20,000 to be paid on incorporation and the remaining £30,000 to come out of profits at £1,000 for the ensuing three years.

The patents assigned to the British company had to be paid for. Another class of patents was paid for equally by both parties, and the third class were to be paid for according to varying circumstances that might arise.

The French companies agreed to give the British company all relevant information and to charge, at cost price, machinery and developing plant, and any assistance required to procure a yearly capacity of 2,500,000 metres of 24mm. sensitized film. This cost was estimated at 600,000 francs. Everything was to be delivered without delay along with all new developments but with all processes to be kept secret from others. Visits to the French plant were allowed to the British for them to observe the production of sound-track film, but not the cinematograph film.

British Ozaphane Ltd. were also obliged to enter into mutual agreements with the Kalle Co. A.G. of Germany and for licences from Le Film Ozaphane S.A. under their licence from Kalle. An independent International Copyright Organization was promulgated for the acquisition of copyrights and performing rights.

The unsensitized raw film was to be purchased from Le Cellophane S.A. of Paris, by Le Film Ozaphane S.A. for the British company or, alternatively, Le Cellophane would give British Cellophane Ltd. the necessary instructions on how to make the raw film. Ozalid would be supplied by Kalle at the same price as supplied to the French. British Ozaphane was bound not to receive supplies of similar materials from any other source.

Fifteen British patents were involved in the agreement, the earliest being from February 1924 and the latest of January 1932. The registered office was at 72a Carlton Hill, London N.W.8. Walter Graeme Ogden, one of the trustees, became Managing Director and the other trustee, Frederick James Chart, a financial agent, became another director. The French companies had the right to appoint one director in every four and appointed one of their own directors, Roger Jacques Birnheim.

The largest stockholders were Princess Street Nominees Ltd., of London, with 74,998 shares. Enila S.A. (of Basle) took 14,500 shares, but these were sold to West Nominees Ltd. in December 1936.

Nine months passed after founding before British Ozaphane was mentioned in the trade press; it was announced in January 1937 that the company was to introduce the Duo-Trac Sound Projector at the British Industries Fair on February 15th. The machine had a light-cell which operated two tracks on an Ozaphane tape wound on a reel, which would play for half an hour or an hour.

As the time approached, a February 6th statement said the company was to give the Duo-Trac an official demonstration 'next week'. The machine was demonstrated to representatives of the press the same day and it was afterwards reported that the film used was made of cellophane, was 4mm. wide and wound on 7-inch reels. It used two parallel tracks and played for 30 minutes. A 9-inch reel played for one hour. When one track had played through, the drive mechanism reversed the motion and played the other track. Machines for the home, incorporating all-wave radio receivers, were to be ready in June. The tone of the machines showed the system promised well for the future.

On February 20th the Duo-Trac's advantages were described in 'The Wireless World' as: (a) Long playing time; (b) Compact storage; (c) Light weight of recordings; (d) Low

Prominent Artistes Enthusiastic about the new "DUO-TRAC" Sound Reel Recordings

**WIDER, HARMONIC RANGE, NO NEEDLE-SCRATCH
MAKE 'DUO-TRAC' REELS ABSOLUTELY LIFE-LIKE**

WHEN the "Duo-Trac" Cell.o.phone was first put on the market, it was obvious that it would be received with enthusiasm by the trade and the public.

The advantages of this wonderful instrument, from the listener's viewpoint, can be recognized at once. The listener gets a programme of his own choosing, yet free from all the bother of changing needles and records — from six to ninety minutes of uninterrupted pleasure.

Even more significant is the enthusiasm

of artistes. As shown by the unsolicited letters (on the right) from Mr. Ivor Novello and Mr. Frank Titterton, artistes agree that the Cell.o.phone really does justice to their performance.

The reason for this is the immensely superior tone of the Cell.o.phone. It has a far wider harmonic range than the average gramophone, and is, of course, completely free from the needle-scratch or atmospherics that may mar ordinary gramophone or radio entertainment.

**MORE AND MORE WELL-KNOWN ARTISTES ARE
RECORDING FOR "DUO-TRAC" CELL-O-PHONE**

When you go through this list of "Duo-Trac" artistes, remember that one light, compact "Duo-Trac" Sound Reel, playing for thirty minutes, is equivalent to five double-sided 10-in. disc records.

Conductors

DR. MALCOLM SARGENT
ALBERT COATES
CONSTANT LAMBERT
CLARENCE RAYBOULD
JOSEPH LEWIS
ARNOLD PERRY
CHARLES PRENTICE

Singers

NORMAN ALLIN
HAROLD WILLIAMS
FRANK TITTERTON
PARRY JONES
BOY HENDERSON
MIRIAM LICETTE
ISOBEL BAILLIE
RAYMOND NEWELL
EDWARD REACH

Pianists

MAURICE COLE
LESLIE ENGLAND

Dance Orchestras

SYDNEY LIPTON AND HIS
GROSVENOR HOUSE
DANCE BAND
GEO. SCOTT-WOOD
BERT FIRMAN AND HIS
CAFE ANGLAIS BAND
EDDIE CARROLL
ALEX MOORE AND HIS
BALLROOM ORCHESTRA

Theatrical and Variety Artistes

IVOR NOVELLO
AL & BOB HARVEY
COLLINSIN & DEAN
CHARLES HESLOP
GRETA KELLER
HAL YATES
MERRYL & FOSTER
MARJORIE STEDEFORD
CECIL JOHNSON
RONALD HILL

ARTHUR ASKEY
BERTHA WILLMOTT
BOBBIE ("Uke") HENSHAW
THREE ADMIRALS
ALMA VANE

Light Orchestras
BROSA STRING QUARTET
MANNUCCI CHAMBER
ORCHESTRA
SHADWICK STRING
QUARTET
ROTH QUINTET
EDA KERSEY
ALFREDO CAMPOLI

Composers conducting
their own works
ERIC COATES
HAYDN WOOD

Military Band
THE BAND OF H.M.
COLDSTREAM GUARDS

IVOR NOVELLO

"I have just heard a Duo-Trac of 'Half an Hour with Ivor Novello,' and I must congratulate you on the superb way it is recorded. It seems to me a most tremendous advance in recorded music to know that you can sit down and listen to half an hour's uninterrupted enjoyment. The tone is absolutely free from scratch and never distorts, however loud the reproduction. Again many congratulations."



FRANK TITTERTON



"I listened with great pleasure to the record I made for your company, and, in my opinion, it is the finest recording I have ever heard. It was most delightful to listen to — there was no feeling of a mechanical instrument."

"One felt that the singers would shortly emerge from behind a curtain — it seemed incredible that they were not there in person. Wishing the Company every success."

SEND IN THIS COUPON

For descriptive literature and details of trade terms, send this coupon to Dept. WT1, British Ozaphone Limited, 46 Albemarle Street, London, W.1.

Name _____

Address _____

Manufactured by
British Ozaphone
Limited, Sales Offices
at 46 Albemarle
Street, London, W.1.
Telephone: Regent
5097.

"Duo-Trac" CELL-O-PHONE

Please mention "The Wireless & Electrical Trader" when replying to Advertisers.

background noise, and (e) better frequency range. The slogan was "We make the records fit the music - not the music fit the records" ... "Unabridged recordings of concerti, symphonies, etcetera are possible."

Table and floor-standing radiograms were announced, available about June 1937. The table model was to have a five-valve, three-band super-het circuit with a single valve pre-amplifier for the sound-on film with an output of three watts. The price was 33gns. with a cabinet in French walnut or cream, black or Chinese red cellulose finish. The cabinet radiograms had a similar radio chassis but the sound-on film output was rated at five watts. The price was 52gns. The finishes available were birds-eye maple, walnut, or black cellulose.

The playing deck of the machines carried the reel of film and the take-up spool. Between the two was the sound head, consisting of a projector lamp and a special photo-electric cell. The film was driven by an arrangement of rollers which was easily threaded.

"Automatic Reverse: In the case of the 7-inch reel the film runs off its spool to the take-up spool in 15 minutes, playing from one of the tracks, it then automatically reverses and plays from the second track, winding back to the original reel. With the 9-inch reel the playing time is 30 minutes each way.

The material used for the film is called Ozaphane and is similar in appearance to cellophane. The sound tracks are printed on it by a special process and are not easily scratched or otherwise damaged. The prices for the reels are 12/6d (7-inch) and 21s. (9-inch) and the first list of records has already been issued."

The 'Music Trades Review' for that same February carried additional information and comment, such as "The film is extremely thin. The recording method is an adoption for home use of that used for 'talkies'. The company consider half-an-hour is the most desirable length for a programme. A first monthly supplement of reel records numbered 1 to 14, each in two parts, is available which includes four dance reels (recorded by West End dance orchestras), a selection of popular programmes such as variety, music hall, sea-shanties etc., and a classical list comprising such works as the Casse-Noisette Suite, Overture Rosamunde, Ballet Music from Faust, Welsh Rhapsody, etc..."

The 'Sound Wave' reported that the 'directors' behind British Ozaphane Ltd were "Graeme Ogden (of tobacco fame), Eugene Wender (inventor of the Post Office clock), technical engineer, and Hary Fletcher, late of the British Homophone Co. Ltd. for which he was a Director and General Recording Manager. Duo-Tracs are being exhibited at the B.I.F. stand No. 914".

British Ozaphane Ltd. held its first annual staff dinner at the Trocadero Restaurant in March 1937, promoted by the directors. Harry Fletcher presented a silver casket to the Chairman and Managing Director, W.H.Ogden. In acceptance, Ogden congratulated all on their efforts during the previous year and said they could count themselves as original members of an organization destined to become a great concern. During the dinner the Duo-Trac played some of the latest reels of swing music. After-dinner entertainment was live cabaret from Clarence Wright, compere, Raymond Newell, Bobbie 'Uke' Henshaw, Helen Raymond, Cecil Johnson, Bertha Wilmott and the Cuvelliers, with Stanley Broadbent at the piano.

AS STARTLING

The new 'Duo-Trac' Cellophone system of reel recording revolutionizes the world of home entertainment. The listener selects his own programme, which plays for six to ninety minutes continuously

AT THE END OF THIS MONTH—just at the time of the Radiolympia Exhibition—you will have your first chance of witnessing an invention which is as important to your business now as television will be some day.

This invention is the 'Duo-Trac' Cellophone system of reel recording. For several years the British Ozaphane Company have been experimenting with Sound Reel Projectors for use in the home. Last year the first 'Duo-Trac' models made their appearance, and now the new, perfected model, the 'Duo-Trac' Cellophone, will for the first time be put extensively on the market.

How the Cellophone works

The Cellophone plays Sound Reels made on the same principle as the sound track used in cinemas. The instrument is simpler to operate than an automatic gramophone. The listener merely inserts the reel, presses a button, and the Cellophone then plays (according to the size of the spool) for six, thirty, sixty or up to ninety minutes without stopping!

Supersedes disc recording

Think what this means. The Cellophone has advantages not found in even the most expensive gramophone or radiogram—no needle, no fuss about changing records or arranging them in order. The 'Duo-Trac' sound strip is free from needle-scratch—it simply passes through a beam of light. Conse-

quently it never wears out—and, unlike disc records, it is light, compact and unbreakable.

Far finer tone, too. The Cellophone has a far wider range of frequencies than the average gramophone. The Cellophone also has an enormous advantage over the plain radio set, since it enables the listener to enjoy a long, uninterrupted programme of his own choice, instead of merely taking what the stations give him.

A constant source of revenue to the dealer

One tremendous advantage that the 'Duo-Trac' Cellophone system has over radio, from the dealer's point of view, is that profits are not confined to the sale of the instrument. Sales of Sound Reels represent a constant and increasing source of revenue. Moreover, their freedom from wear opens up the possibility of a profitable library business.

Comprehensive range of 'Duo-Trac' Sound Reels already prepared

The catalogue of 'Duo-Trac' Sound Reels already available comprises entertainment to meet every taste—symphony orchestras, chamber music, dance-bands and the stars of stage and vaudeville. There will be monthly supplementary issues of recordings by world-famous artists.

These reels are NON-INFLAMMABLE, and can be stored anywhere without risk.

GENEROUS TRADE TERMS

'DUO-TRAC' SOUND REELS, Cellophones and Radio Cellophones are offered to selected dealers on generous terms, and with the following specially advantageous conditions:

- 1 Only first-rate dealers are appointed to handle 'Duo-Trac' Cellophone, and are given ample territorial protection.
- 2 The British Ozaphane Company distributes direct to retailers. PRICE-MAINTENANCE is rigidly enforced.
- 3 Distribution is restricted to dealers with full SERVICE FACILITIES, who will have the co-operation of the Company's own Service Department.
- 4 Sales of 'Duo-Trac' Cellophone will be supported by STEADY ADVERTISING, including co-operative mailing.

THE MEN YOU WILL BE DEALING WITH

These three men, whose names and personalities are familiar to you, are personally responsible for the conduct of the business and it is their aim to maintain the closest possible contact with every dealer.



Mr. Leslie T. Neck, now a director of British Ozaphane.

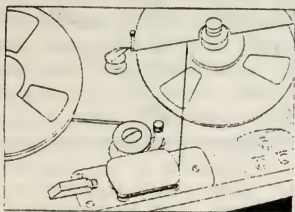


Mr. Graeme Ogden Managing Director of British Ozaphane, and the inventor of the 'Duo-Trac' Cellophone system.



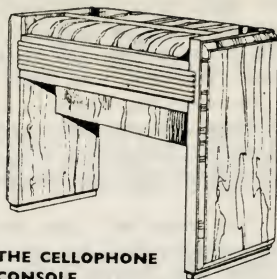
Mr. Benley Jones, Sales Manager of British Ozaphane.

AS TELEVISION



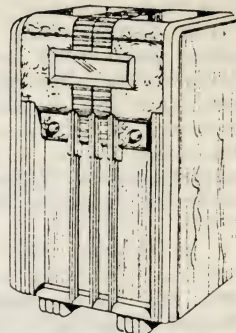
THE CELLOPHONE PLAYING BOARD

The Sound Reel ribbon passes between the exciter lamp and the light-sensitive cell. This latest Playing Board has an entirely new automatic switch mechanism. A simple adjustment increases running time for reproducing Talking Books. Quick re-wind.



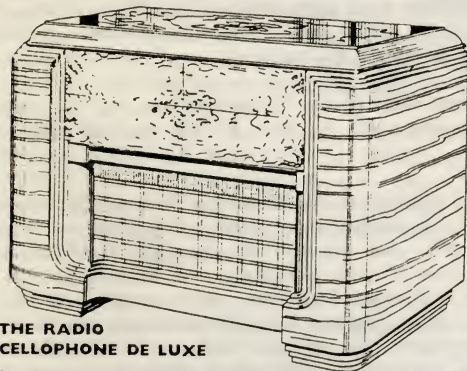
THE CELLOPHONE CONSOLE

which incorporates a pre-amplifier, and is plugged into radio receivers (for which it forms a stand) or radiograms. Takes Sound Reels of from 6 to 90 minutes.



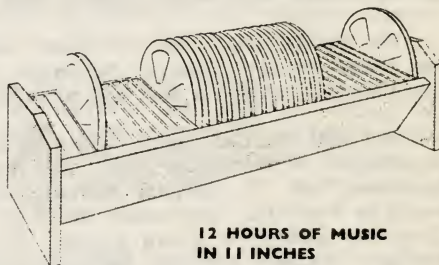
THE RADIO CELLOPHONE

incorporates, in addition to the playing mechanism, an all-wave superheterodyne radio set, with triple diode circuit and inverse back-coupling.



THE RADIO CELLOPHONE DE LUXE

In addition to the playing mechanism and super all-wave radio, this model has a special high-fidelity amplifier, with 10-watt undistorted output.



12 HOURS OF MUSIC IN 11 INCHES

Duo-Trac' Sound Reels are *non-inflammable*, and so compact that 12 hours of music occupy only 11 inches on a rack. Spools are of three sizes, 4, 7, and 9 inches diameter, playing from 6 up to 90 minutes, and permitting complete works to be recorded unabridged.

"DUO-TRAC" CELLOPHONE **REEL RECORDING SYSTEM**

**WHEN YOU ARE IN LONDON
FOR RADIOLYMPIA,**

you are cordially invited to visit the British Ozaphane Company's Showroom at 46 Albemarle Street, W.1, for a demonstration of the new Cellophones.

SEND IN THIS COUPON. To British Ozaphane Limited, 46 Albemarle Street, London, W.1. I am interested in the 'Duo-Trac' Cellophone system. Please send me full descriptive literature and details of trade terms.

Name _____

Address _____

Please mention "The Wireless & Electrical Trader" when replying to Advertisers.

Leslie Thomas Neck, well-known in the industry, was appointed a fourth Director of British Ozaphane on June 13th 1937. In the following month the company announced that the whole production of their 1937 models had been sold and they had brought forward their 1938 production schedule for delivery late in August. One of the most interesting of the new models was to be a Duo-Trac 'Sole Sound Projector' in the form of a playing desk which could be used with any existing radio receiver. The other two models were a console with new refinements and a three-band radio receiver, and a 'Super Console' with new high fidelity amplifier, a separate all-wave receiver and separate speakers for the sound projector and receiver. Features of the new models were to be a simplified method of attaching the reels, and reels playing from six minutes to one hour. In August, the Duo-Trac was described as the Cellophone Reel Recording System. In September, the company began a twice-monthly advertising campaign with the slogan "Music on a Ribbon"... "Sound Reels lasting six to ninety minutes - Address for Information, 46 Albermarle St. London W.1." A whole-page advertisement carried an artists' list and testimonials from some of the artists.

In October 1937 it was reported that British Ozaphane Ltd had formed a new company, E.H.Scott Radio Laboratories Ltd. in association with E.H.Scott Radio Laboratories Inc. of Chicago. The new British company had the same board of directors as British Ozaphane. Scott radio receivers were to be made at Ozaphane's works at Aintree Road, Perivale, Middlesex. A sixteen-valve set was to be produced, an exact copy of the smallest receiver made by the American company. It would carry a five-year guarantee. Models were to become available with and without the Duo-Trac reproducer and possibly an ordinary disc reproducer. This new company's office was also at 72a Carlton Hill, where dealers were asked to write for details.

On March 26th 1938 the Scott radio was said to be in production, to be called the Scott Sixteen Console Automatic Radiogram and to sell at 60 and 90 guineas. The Duo-Trac projector was not mentioned.

The company had been founded on £100 of capital in 5s. shares. This was increased to £15,000 in December 1937, the majority of shares being taken by Princes Street Nominees Ltd. A £10,000 mortgage debenture was created in January 1938 on the works at Perivale. The holder was F.J.Chart, one of the Directors. In March, British Ozaphane applied for a new patent. In May, Harry Fletcher was appointed Sales Manager in place of a Mr. Bentley-Jones who had resigned. J. Bennett was the London representative. Another £5000 mortgage debenture was created on June 2nd 1938 and a third, for £20,000, on July 15th. Chart was again the holder for both. On September 13th. Mr. Neck resigned his Directorship.

The Duo-Trac advertisements continued in 1938, and in December a newly-worded advertisement appeared. This read "Duo-Trac - 1939 - Music on a Ribbon - New Models - New Recordings. Ask for particulars of Dealership from British Ozaphane Ltd. 12a Carlton Hill, London N.W.8." This followed a month of silence from the company, whose last advertisement in the old style had been in the October 2nd issue of the Wireless Trader. The company continued to advertise the Duo-Trac machines and the ribbon records until August 1939, the last advertisement appearing in the Wireless Trader on July 29th. (The Second World War arrived on September 3rd).

On December 27th 1939 the Chairman and Managing Director, W.G.Ogden, resigned and his position was taken by a Sidney Angell, who had formerly been known as Sidney Angello. He was a director and General Manager of E.H.Scott Radio Laboratories but he did not last very long and resigned on May 9 1940. Another E.H.Scott director

took his place on the 25th of that month: this was Cyril Offord Hamer and it was his Duo-Trac machine which is now owned by our member. Hamer was chief engineer for the radio firm.

In June 1940 British Ozaphane's Registered Office was moved to the works in Perivale. The E.H.Scott Radio Laboratories are known to have been still in being in January 1941. Gwendoline Barker, the Company Secretary of British Ozaphane, was appointed a director in July 1941 and the Registered Office was moved back to 72a Carlton Hill. At about this time, the French director Birheim escaped from German-occupied Paris and was in Lausanne, where he was trying to arrange a journey to America, as late as December 4th 1942.

By July 16th 1945 the Registered Office had gone back to Aintree Road, Perivale, but soon after this the company must have resolved to wind up its affairs as the office was removed to a solicitor's address at 1 Guildhall Chambers, 31 Basinghall Street, E.C.2, on February 11th 1946.

The mortgaged debentures were all satisfied, to some extent, on March 7th 1946; that for £10,000 completely, that for £3,000 to the tune of £2,000 and that for £20,000 to the amount of £11,650. British Ozaphane Ltd. was struck from the Companies House register of October 10th 1950, by notice in the London Gazette.

Does anyone know when the last Duo-Trac machines were manufactured or advertised? Has anyone acquired any catalogues of the reel records, or can anyone provide partial lists of any of the recordings which went to make up the complete output? When was the last supplement published?

72a Carlton Hill had earlier been in use as the recording studios and offices of Trusound Pictorial Records. In 1945 the premises became the registered office and studios of Kay Film Printing Co. Ltd. They were manufacturers of sound recording equipment, and it may well be that this was a successor company to the two immediately preceding occupants. Could the "Kay" have derived from the association of Kalle A.G. of Germany?

Some time after October 1946 this company changed its name to Kay Carlton Hill Sound Recording Studios, then, after October 1949 the name was changed again, this time to Kay Carlton Hill Film Studios, under which name it traded until after October 1970, when the name was changed for the last time to Kay Carlton Hill Sound Recording Studios. This firm had left the premises by October 1974 and had probably gone out of business.

CALLING ALL SOUTH AUSTRALIAN MEMBERS

South Australian collectors have a very progressive and enthusiastic society within easy reach. The Phonograph Society of South Australia has recently been revitalised with a new committee. There are monthly meetings many of which feature record and machine auctions in addition to the usual swapping. Attendance appears to be very high with good programmes. There is a monthly news sheet and occasional reprinted catalogues etc. Further details from the Secretary, [REDACTED] South Australia.

D.R.R.

A GRAMOPHILE'S GRAMOPHONE

Readers with long memories may recall that, some years ago (October 1969 in fact), George Overstall wrote an account of a gramophone he had constructed with a large open horn. It used a modern electric motor, but all the acoustic system was home-made, including the soundbox, and thus it will come as no surprise to learn that Jim Goodall has been taking a look at this unusual machine. His report follows.....

The Overstall gramophone is housed in a beautifully polished mahogany cabinet, made from a 19th-century mahogany counter-top. The turntable is driven by an electric motor. The stem of the horn emerges from the back at the end remote from the tone-arm, and supports the square-sectioned throat which rises upwards before sweeping forward in a graceful curve over the top of the machine as it flares out to a square opening with sides measuring 2ft. 5in. The horn is made up of four panels of 6mm marine birch-ply cut meticulously to shape and skilfully bonded despite being very tough to form into the curvature of the horn. The horn is beautifully finished in a rich shade of brown paint. The brass tone arm is 18 inches long and of $\frac{1}{2}$ -inch parallel bore throughout. The forward jointed section is connected to a counterpoise of two helical springs whose far ends are supported from a 'T' piece mounted above the rear pivot. This reduces the pressure of the needle on the record just enough to ensure that the needle rides the groove smoothly without any chatter or damage to the groove. Thus with minimum record wear, full advantage can be taken of the inertia of the soundbox.

It is this inertia which permits the modulations of the groove, the bass modulations in particular, to be absorbed fully by the diaphragm instead of being partially dissipated in throwing the soundbox bodily to and fro. This is of great advantage to George who uses only fibre needles which he cuts from a bamboo pole kept for the purpose. Because of the counterpoise, the needle point rests so lightly on the record that he can play ten sides without having to resharpen it. His home-made soundboxes are solidly constructed very much in the style of E.M.G. and Expert and with a bright polished finish. The overall workmanship is definitely superior to that of the Ginn types.

George makes his own diaphragms by spinning them in a lathe on a purpose-made former. This produces a diaphragm with a small deep central dome with two deep concentric rings. The shape is the result of much trial and error. In appearance, his diaphragms are almost identical to the original metal diaphragms made by E.M.G. Some are smaller in size to fit a very neat little soundbox he makes to produce a softer tone. He also showed me a number of stroboscopes he had made, so that he can regulate the speed of his turntable to suit recordings made at speeds other than 78r.p.m. To determine the number of spokes for a stroboscope of a given speed, simply multiply 50 (or 60, according to the electricity supply) by 120 and divide the result by the speed required. One other refinement is a small light bulb which switches on above the playing deck when the lid is raised.

Most important is the sound produced by the Overstall gramophone. All I can say is that it was not only very good, but out of this world so far as tone quality is concerned. Its wide frequency range gave a delightful clear crisp edge to all of the

treble register, while at the other end, the bass cut-off was so low as to give a realistically deep fullness and depth to the reproduction. The sound conduit and horn, having been built and shaped strictly according to accurate mathematical calculations, gave none of that raucous blast often associated with badly designed machines, but gave such pleasant and comfortable listening as to leave nothing to be desired. Its sound was more natural than that of even a first class electric music centre.

I am going to be very critical here in order to illustrate something I have long been wanting to find out, and that is: To what extent is it necessary to have a very long horn to ensure a truly realistic reproduction of the bass notes produced by an orchestra or an organ? I was now able to compare George Overstall's smaller machine with Douglas Fitzpatrick's enormous gramophone (said to be the largest in the world) which I had listened to at Sheringham Hall. Quite honestly, I could not find anything noticeably lacking although the dimensional differences between the two instruments are considerable. The sound system of Douglas' gramophone from soundbox to horn mouth is 24 feet long, flaring to a rectangular opening 8 feet wide by five feet high, while George's system is only 9 feet long with a square opening of 29 inches. What appears to be the case is that, firstly, the lower the frequency, the less sensitive is the human ear in responding to it. Consequently, the higher bass cut-off of a shorter horn is not enough to impoverish the quality of reproduction. This means that beyond a certain value, further increasing of the length of the horn makes little or no perceptible difference, and even mathematically, the difference in the cut-off frequency is not all that great.

Secondly, however, there was one effect from Douglas' gramophone that did seem quite prominent, and that was a kind of stereophonic impression of the artist or artists performing on a stage in front of one. This is an effect for which a horn of very large dimensions is absolutely necessary - the bigger the horn, the better the effect; and correspondingly, as such a horn needs to have a very wide mouth, a much greater length of stem and sound conduit is necessary to produce a proper tonal balance. As for actual volume of sound emitted, within certain mechanical limits, the size of horn makes comparatively little difference, but by increasing the area from which the sound is distributed, the 'stage effect' is brought into prominence. Lastly, of course, the quality of sound projected by any horn is influenced by the efficiency of the soundbox. The higher cut-off of a shorter horn is bound to be offset by a more efficient soundbox. The environment in which the gramophone is housed also greatly affects the sound quality, and it may be necessary to shape the horn to match the environment.

Following my introduction to George's gramophone and my decidedly positive assessment of it, we got down to some experiments. We started by pitting my specially treated soundboxes against his home-made ones. His machine would naturally bring out the very best from any soundbox. We tried my H.M.V. No. 2, No. 4 and Exhibition soundboxes followed by a large Goldring 'Luxus Electro'. They all performed extremely well, and allowing for the fact, except for the Exhibition, all mine were larger than his, the sound from the modified commercial soundboxes was in the main a little louder, although they were perhaps not quite as good on fineness of definition. The Luxus Electro was fine on the bass, and equally so was the smaller H.M.V. No. 2 which seemed slightly more brilliant and earned George's commendation. The No. 2 had been modified with a 1/16-inch hollow gasket and fitted with a mica diaphragm from a which a thin layer of mica had been scaled off to give it more compliance. This considerably improved bass response.

George's tone-arm ends in a T-joint on which the soundbox is mounted, and inserted in the end behind the soundbox is a filter which can be screwed in or out to filter out some of the high frequencies of surface scratch. Normally, if there is a gap of any sort in the back plate (e.g. a screw out, a crack or a badly fitting washer), this allows an escape of air through the gap so that part of each compression from the movement of the diaphragm is lost through the back of the soundbox instead of going down the tone-arm. The result is a considerable weakening of the sound and a great loss of bass response. I asked George to remove the filter entirely so as to leave a clear opening immediately behind the sleeve of the back plate so that we could see how much sound would actually come through the horn. Furthermore, a right-angled bend is not the best of paths for sound waves to negotiate.

Contrary to expectations, the output of sound was not drastically reduced, and the loss of bass response was much less than expected. It surprised us to observe how sound gets round corners and seems to break acoustic laws.

Another experiment was to show what a vastly greater amount of energy can be fed into a horn by an electric amplifier than by even the best of soundboxes. George had a record player with an electric pick-up and amplifier connected to a small box about 6 inches square containing a moving coil speaker whose armature was attached to the dome of a Columbia soundbox diaphragm which acted as the cone of the speaker. The output lead from the amplifier was plugged into a sleeve projecting from one side of the box while the sleeve projecting from the other side fitted over the end of the gramophone tone-arm. He explained that, to obtain comfortable listening, the volume had to be cut to a minimum, but on starting the gramophone he forgot to check the volume control and the result was a shattering blast like a stun grenade. Rigged up in this fashion, his gramophone would be more useful as a fog horn. With the volume turned down to little more than necessary to operate a pair of headphones, it produced a most pleasant level of sound compatible with that of one of his soundboxes.

A third experiment, attempting to play long-playing records acoustically, was a failure. The counterbalanced tone-arm and finely tuned soundbox, together with a motor capable of running satisfactorily at $33\frac{1}{3}$ r.p.m., provided an ideal opportunity to try something that I have been wondering about for years. However, although good reproduction was obtained from the louder passages, the small modulations in the groove at low volume simply could not produce more than a whisper from the diaphragm. Record wear was considerable (a miniature thorn needle was used), but even if the record were made of harder material and the stylus had a properly ground diamond tip, it is clear that the lack of mechanical power in the groove would rule out mechanical reproduction from l.p.s. with existing forms of soundbox.

While staying near George Overstall I called on George Fudge, who makes reproduction phonograph horns. He takes orders from home and abroad for making these; the panels are formed with the aid of specially built wooden frames. I also saw two horn gramophones, and George F. is well versed on soundboxes as well, a favourite of his being a large Astra. This one had the sleeve mounted off-centre on the backplate so that the box can be accommodated on a normal tone-arm without fouling the goose-neck joint and also in order that the stylus bar and needle remain perpendicular to the radius of the record. This Astra had the stylus bar pivoted on two knife-edges on the face of the bezel, with a single spring-loaded screw holding it in place. The Astra gave a magnificent performance on a Monarch, putting the original soundbox in the shade. I enjoyed immensely meeting George Overstall and George Fudge and sharing interests.



THE OVERSTALL GRAMOPHONE

Left: general view of the gramophone and its matching stand.

Below: close-up of the tone-up and soundbox.



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